Unit 2 Review

These topics will be covered on this test: Photosynthesis and Cellular Respiration, Food Chains and Food Webs, the Trophic Pyramid, and Biomes.

1. What is Photosynthesis? Include as much detail as you can in your answer.

Photosynthesis is the process plants go through to make their food from sunlight, carbon dioxide and water. The process happens in the chloroplast which is the part of a plant cell that makes the plant green. In addition to food the plant releases oxygen as part of the process.

2. What is the chemical equation for Photosynthesis?

Sunlight + 6H2O + 6CO2 ---> C6H12O6 + 6O2

Energy + Water + Carbon Dioxide ---> Glucose + Oxygen

3. What is Cellular Respiration? Include as much detail as you can in your answer.

Cellular Respiration is the process all living things do to take the energy out of food. The process happens in the mitochondria of plant and animal cells. Living things take apart glucose and oxygen molecules, keep the energy and use the pieces to make water and carbon dioxide which they release.

4. What is the chemical equation for Cellular Respiration?

C6H12O6 + 6O2 ---> Sunlight + 6H2O + 6CO2

Glucose + Oxygen ---> Energy + Water + Carbon Dioxide

5. What energy changes take place during Photosynthesis and Cellular Respiration?

Light CPE ATP

Heat Heat

6. How are Photosynthesis and Cellular Respiration related?

Photosynthesis provides the glucose and oxygen needed for Cellular Respiration to happen. Cellular Respiration provides the CO2 and H2O needed for photosynthesis to happen. In this way they act a cycle.

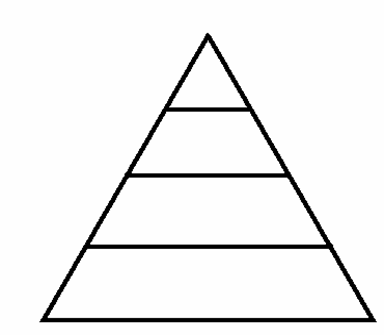
7. What are the 6 steps of the food chain?

Sun ----> Plant ----> Herbivore ----> Carnivore ----> Scavenger ----> Decomposer

8. Which are better: food chains or food webs? Why?

Food webs are better. Food chains only show one possible path for how energy is passed through an ecosystem. Food webs more accurately show that there are a large number of possible paths.

9. Fill in the levels of the trophic pyramid.



Tertiary Consumer

Owl

Snake Secondary Consumer

Mouse Primary Consumer

Sunflower Producer

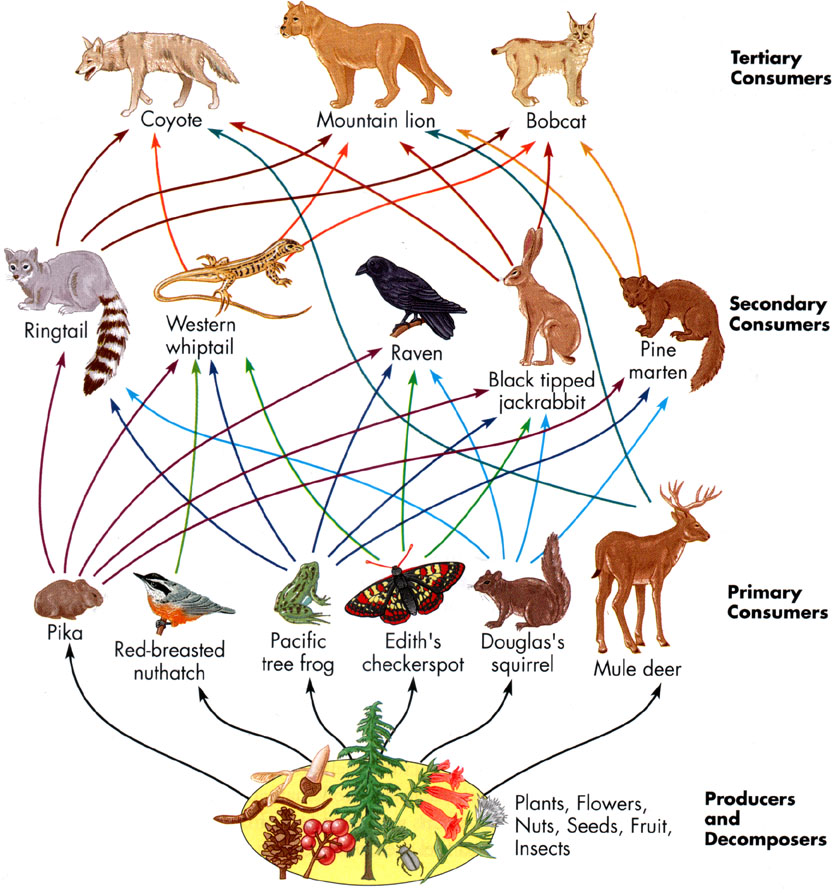
10. Write in an example of an organism for each level of the trophic pyramid above.

See Above in the Pyramid

11. What happens to the amount of energy that gets passed on from one level to the next as you move up the pyramid? Why?

As you move up the pyramid the amount of energy passed along gets smaller and smaller. This happens because each organism uses some of the energy it gets from the lower level before being passed up the chain and because every time energy is transferred some goes to heat.

Use the Food Web to answer the questions.



12. What does the Raven eat? Pika, Pacific Tree Frog, Edith’s chekerspot and Douglas’s Squirrel

13. Who eats the Pine Marten? The mountain lion and the bobcat

14. Who has the most variety in their diet? The mountain lion eats 5 things

15. Who has the most predators? It’s a tie between the pika and pacific tree fro with 5 each

16. Write out one food CHAIN that you see in the food web. (stop after carnivore)

Sun ----> Seeds ----> Red-Breasted Nuthatch ----> Western Whiptail

17. Write out 3 relationships that you see in this food web.

The Jackrabbit has 3 predators (M. Lion, Bobcat, and Coyote).

The Ringtail eats 3 primary consumers (Pika, Douglas’s Squirrel, and Pacific Tree Frog).

The Raven has no predators in this food web.